APPLICATION OF REMOTE SENSING FOR FISHERY RESOURCE ASSESSMENT AND MONITORING

SKYLAB EXPERIMENT NO. 240

CONTRACT NO. T-8217B

(E75-10408) APPLICATION OF REMOTE SENSING FOR FISHERY RESOURCE ASSESSMENT AND MONITORING Progress Report, 1-31 Jul. 1975 (Mississippi Test Facility) 3 p HC $3.25 CSCL 08A G3/43

N75-33463

Unclas 00408

PROGRESS REPORT NO. 19

REPORTING PERIOD: 1 July to 31 July 1975

Approved: Kenneth J. Savastano

Date Submitted: 8/22/75

Technical Monitor: KH Faller
NASA/JSC Earth Resources Laboratory
National Space Technology Laboratories
Bay Saint Louis, Mississippi 39520

APPLICATION OF REMOTE SENSING FOR FISHERY RESOURCE ASSESSMENT AND MONITORING

INTRODUCTION

This is report #19 of a series of progress reports required by the Statement of Work for Skylab Experiment #240 entitled "Application of Remote Sensing for Oceanic Gamefish Assessment and Monitoring" under Contract No. T-8217B.

ITEMS RECEIVED FROM NASA/JSC

1. Sensor Performance Evaluation Final Report, Vol. I (S190A), May 12, 1975.
2. Sensor Performance Evaluation Final Report, Vol. III (S192), May 5, 1975.

OVERALL STATUS

S192

A. Completed software modification required to analyze S192 radiance values from the 13 spectral channels in conjunction with the white marlin distribution data. Evaluation of the S-192 data tapes revealed that the tapes were in the correct format and covered the desired area. Display tapes have been generated for two tapes covering approximately one-third of the test area. Noise does not seem severe and will probably not influence the analysis. Sun glitter is severe (as expected) and makes analysis difficult if not impossible. Manipulation of displayed data has allowed us to look at channel 1 (.52 - .56 μm) minus channel 5 (.62 - .67 μm) on one gun of the color display and channel 3 (.56 - .61 μm) minus channel 5 on the second gun. The resulting display showed a reduced effect of the glitter and in fact smoothed the display considerably. The display tapes were not generated with the intention of reducing the glitter effects and are therefore not optimized for that task. In an attempt to reduce the sun glitter, a sample display tape is being prepared which will allow the display of channels 1 and

3 minus channel 10 (.78 - .88 μm). This should reduce the glitter without reducing the information content significantly.

B. A draft of the final report has been started and should be completed by September 30, 1975.

EXPECTED ACCOMPLISHMENTS

Completion of sample display tapes processed to reduce sun glitter will be accomplished in the next month. An evaluation of the data will be made to determine if the glitter corrected tape shows features in the water which might be interpreted to correlate to the biological data or to oceanographic data. If the results are positive, data will be extracted and formatted for statistical analysis. If no significant variation is seen, no further extraction or analysis of the S192 will be performed. The S192 evaluation and analysis to date will be documented, and added to the final report draft.